PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	**CERTIFICATE OF EXPRESS MAIL**
EDMUND W. BROWN	
Parent Data Information:	I hereby certify that this correspondence is being deposited with the United States Postal Service as EXPRESS MAIL in an envelope addressed to: ASSISTANT COMMISSIONER FOR PATENTS, BOX NEW APPLN.-DIVISIONAL-FEE, WASHINGTON, D.C. 20231 on January 25, 2001. Express Mail Label No.: **EL741409425US**
Serial No.: 09/649,835	
Filed: August 29, 2000	
Examiner: Not Yet Assigned	
Art Unit: 3651	Sharon Janus
	Name
TRANSFER MECHANISM FOR MULTIPLE LEVEL CONVEYOR	Sharon Janus Jan 25, 2001
	Signature Date

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Box New Divisional Appln. - Fee
Washington, D.C. 20231

Sir:

This constitutes a request to file a divisional application pursuant to Rule 1.53(b). A check for the filing fee in amount of $355.00 is attached. If the amount of the check is incorrect, please debit or credit Deposit Account No. 10-0270 with the difference.

The prior application was a complete application as set forth in Rule 1.51(a). Attached hereto is a true copy of the prior complete application as filed including the specification, the claims, the drawing and the Declaration re Patent Application. The amendment referred to in the Declaration and filed to complete the prior application are included in the true copy and no new matter is thereby introduced.

EDMUND W. BROWN

The inventor named in this divisional application is the same inventor named in the prior application.

The assignee's status as a small entity was established in the parent application and is still proper.

Please amend the application as follows:

IN THE TITLE:

Please amend the title as follows:

- - - DAMPENING CYLINDER FOR TRANSFER MECHANISM - - -

IN THE SPECIFICATION:

The divisional application is amended as follows: below the title of the invention and preceding the "Field of the Invention," please insert:

--Related Application

This application is a division of application Serial No. 09/649,835, filed August 29, 2000.---

Page 1, line 5	after "a" and before "transfer" insert - - - dampening cylinder for a - - -

Cancel page 2, line 4 through page 5, line 17 and insert the following:

- - Therefore, it is a primary object and feature of the present invention to provide a dampening cylinder for a transfer mechanism which transfers a load between a first upper conveyor and a second lower conveyor.

It is a further object and feature of the present invention to provide a dampening cylinder for a transfer mechanism which controls the movement of the transfer mechanism between a first upper conveyor; a second lower conveyor; and an intermediate position wherein a load being transferred may be acted upon.

It is a still further object and feature of the present invention to provide a dampening cylinder for a transfer mechanism which transfers a load between an upper conveyor and a second lower conveyor which is simple and inexpensive to manufacture.

In accordance with the present invention, a dampening cylinder is provided. The dampening cylinder includes a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein. A piston slidably extends through the cavity in the housing. A flange projects from the piston within the cavity so as to divide the cavity in the housing into first and second portions. The flange terminates at a radially outer edge which forms a slidable interface with the inner surface of the housing. A flow conduit has a first end communicating with the first portion of the cavity in the housing and a second end communicating with the second portion of the housing. The flow conduit includes first and second flow control valves for controlling the flow of fluid between the first and second portion of the cavity in the housing.

The first control valve includes first and second orifices interconnected by first and second parallel flow paths. The first control valve includes a flow regulator movable between a first retracted position wherein the flow regulator is removed from the first flow path and a second extended position wherein the flow regulator extends into the first flow path. A check valve is disposed in the second flow path of the first control valve. The check valve allows for the flow of fluid through the second flow path in a first direction and prevents the flow of fluid through the second flow path in a second direction.

The second flow control valve also includes first and second orifices interconnected by first and second parallel flow paths. The first and second flow control valves are connected in series. The second flow control valve includes a flow regulator movable between a first retracted position wherein the flow regulator of the second control valve is removed from the first flow path of the second flow control valve and a second extended position wherein the flow regulator of the second flow control valve extends into the first flow path of the second flow control valve. A check valve is disposed in the second flow path of the second flow control valve. The check valve of the second flow control valve allows for the flow of fluid through the second flow path of the second flow control valve in the second direction and prevents the flow of fluid through the second flow path of the second flow control valve in the first direction.

In accordance with a further aspect of the present invention, a dampening cylinder is provided. The dampening cylinder includes a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein. A piston slidably extends through the cavity in the housing. A flange projects from the piston and is positioned within the cavity so as to divide the cavity in the housing into first and second portions. The flange terminates at a radially outer edge which forms a slidable interface with the inner surface of the housing. A first conduit has a first end communicating with the first portion of the cavity in the housing and a second end. A second conduit has a first end communicating with the second portion of the cavity in the housing and a second end. A control valve structure is disposed between first and second conduits for controlling the flow of fluid between the first and second portions of the cavity in the housing.

The control valve structure includes first and second flow control valves connected in series between first and second conduits. The first flow control valve includes first and second orifices interconnected by first and second parallel flow paths. The first orifice communicates with the first portion of the cavity through the first conduit. The first flow control valve includes a flow regulator movable between a first retracted position wherein the flow regulator is removed from the first flow path and a second extended position wherein the flow regulator extends into

the first flow path. A check valve is disposed in the second flow path of the first flow control valve. The check valve allows for the flow of fluid through the second flow path in a first direction and prevents the flow of fluid through the second flow path in a second direction.

The second flow control valve also includes first and second orifices interconnected by first and second parallel flow paths. The second flow control valve includes a flow regulator movable between a first retracted position wherein the flow regulator of the second flow control valve is removed from the first flow path of the second flow control valve and a second extended position wherein the flow regulator of the second flow control valve extends into the first flow path of the second flow control valve. A check valve is disposed in the second flow path of the second flow control valve. The check valve of the second flow control valve allows for the flow of fluid through the second flow path of the second flow control valve in the second direction and prevents the flow of fluid through the second flow path of the second flow control valve in the first direction. - -

IN THE CLAIMS:

Cancel claims 1-21.

Please add new claims 22 - 38, as follows:

22. A dampening cylinder, comprising:

a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein;

a piston slidably extending through the cavity in the housing;

a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing; and

a flow conduit having a first end communicating with the first portion of the cavity in the housing and a second end communicating with the second portion of the cavity in the housing, the flow conduit including:

a first and second flow control valves for controlling the flow of fluid between the first and second portions of the cavity in the housing.

23. The dampening cylinder of claim 22 wherein the first flow control valve includes first and second orifices interconnected by first and second parallel flow paths.

24. The dampening cylinder of claim 23 wherein the first flow control valve includes a flow regulator movable between a first retracted position wherein the flow regulator is removed from the first flow path and a second extended position wherein the flow regulator extends into the first flow path.

25. The dampening cylinder of claim 24 wherein the first flow control valve includes a check valve disposed in the second flow path, the check valve allowing the flow of fluid through the second flow path in a first direction and preventing the flow of fluid through the second flow path in a second direction.

26. The dampening cylinder of claim 25 wherein the second flow control valve includes first and second orifices interconnected by first and second parallel flow paths.

27. The dampening cylinder of claim 26 wherein the first and second flow control valves are connected in series.

28. The dampening cylinder of claim 26 wherein the second flow control valve includes a flow regulator movable between a first retracted position wherein the flow regulator of the

second flow control valve is removed from the first flow path of the second flow control valve and a second extended position wherein the flow regulator of the second flow control valve extends into the first flow path of the second flow control valve.

29. The dampening cylinder of claim 28 wherein the second flow control valve includes a check valve disposed in the second flow path of the second flow control valve, the check valve of the second flow control valve allowing the flow of fluid through the second flow path of the second flow control valve in the second direction and preventing the flow of fluid through the second flow path of the second flow control valve in the first direction.

30. A dampening cylinder, comprising:

a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein;

a piston slidably extending through the cavity in the housing;

a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing;

a first conduit having a first end communicating with the first portion of the cavity in the housing and a second end;

a second conduit having a first end communicating with the second portion of the cavity in the housing and a second end; and

a control valve structure disposed between the first and second conduits for controlling the flow of fluid between the first and second portions of the cavity in the housing.

31. The dampening cylinder of claim 30 wherein the control valve structure includes first and second flow control valves connected in series between the first and second conduits.

32. The dampening cylinder of claim 31 wherein the first flow control valve includes first and second orifices interconnected by first and second parallel flow paths, the first orifice communicating with the first portion of the cavity through the first conduit.

33. The dampening cylinder of claim 32 wherein the first flow control valve includes a flow regulator movable between a first retracted position wherein the flow regulator is removed from the first flow path and a second extended position wherein the flow regulator extends into the first flow path.

34. The dampening cylinder of claim 33 wherein the first flow control valve includes a check valve disposed in the second flow path, the check valve allowing the flow of fluid through the second flow path in a first direction and preventing the flow of fluid through the second flow path in a second direction.

35. The dampening cylinder of claim 34 wherein the second flow control valve includes first and second orifices interconnected by first and second parallel flow paths.

36. The dampening cylinder of claim 35 wherein the second flow control valve includes a flow regulator movable between a first retracted position wherein the flow regulator of the second flow control valve is removed from the first flow path of the second flow control valve and a second extended position wherein the flow regulator of the second flow control valve extends into the first flow path of the second flow control valve.

37. The dampening cylinder of claim 36 wherein the second flow control valve includes a check valve disposed in the second flow path of the second flow control valve, the check valve of the second flow control valve allowing the flow of fluid through the second flow path of the second flow control valve in the second direction and preventing the flow of fluid through the

second flow path of the second flow control valve in the first direction.

38. A dampening cylinder, comprising:

a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein;

a piston slidably extending through the cavity in the housing;

a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing;

a first conduit having a first end communicating with the first portion of the cavity in the housing and a second end;

a second conduit having a first end communicating with the second portion of the cavity in the housing and a second end;

a first flow control valve having first and second orifices interconnected by first and second parallel flow paths, the first orifice connected to the second end of the first conduit so as to allow the first and second flow paths through the first flow control valve to communicate with the first portion of the cavity through the first conduit, the first flow control valve including:

a flow regulator movable between a first retracted position wherein the flow regulator is removed from the first flow path through the first flow control valve and a second extended position wherein the flow regulator extends into the first flow path through the first flow control valve; and

a check valve disposed in the second flow path through the first flow control valve, the check valve allowing the flow of fluid through the second flow path through the first flow control valve in a first direction and preventing the flow of fluid through the second flow path through the first flow control valve in a second direction;

a second flow control valve having first and second orifices interconnected by first and second parallel flow paths and being connected in series with the first flow control valve, the first

orifice of the second flow control valve connected to the second end of the second conduit so as to allow the first and second flow paths through the second flow control valve to communicate with the second portion of the cavity through the second conduit, and the second orifice of the second flow control valve communicating with the first orifice of the first flow control valve, the second flow control valve including:

a flow regulator movable between a first retracted position wherein the flow regulator of the second flow control valve is removed from the first flow path through the first second control valve and a second extended position wherein the flow regulator of the second flow control valve extends into the first flow path through the second flow control valve; and

a check valve disposed in the second flow path through the second flow control valve, the check valve allowing the flow of fluid through the second flow path through the second flow control valve in the second direction and preventing the flow of fluid through the first flow path through the second flow control valve in the first direction

39. The dampening cylinder of claim 38 further comprising a mounting flange extending from the cylindrical housing for facilitating the mounting of the dampening cylinder to a support.

IN THE ABSTRACT:

Page 23, cancel lines 3 through 15 and insert the following:

- -A dampening cylinder is provided for a transfer mechanism which transfers a load between an upper conveyor and a lower conveyor. The dampening cylinder includes a cylindrical housing defining a cavity therein and a piston slidably extending through the cavity. A flange projects from the piston to divide the cavity in the housing into first and second portions. A control valve structure is disposed between the first and second portions of the cavity

in the housing for controlling the flow of fluid therebetween.--

REMARKS

Claims 1-21 were pending in parent application U.S. Serial No. 09/649,835.

This preliminary amendment cancels claims 1-21, without prejudice or disclaimer, and adds new claims 22-39 in order to more particularly claim the invention for which protection is sought.

Applicant believes that the present application with claims 22-39 is in proper form for allowance and such action is earnestly solicited.

Respectfully submitted,

Jansson, Shupe, Munger & Stomma, Ltd.

Peter C. Stomma, Reg. No.: 36,020

Main Street, 245 Main Street
Racine, WI 53403-1034
(262) 632-6900
Atty. Docket No.: TOP-101DIV